APRIL 12, 1989
NARRATIVE FOR
JACKSON COUNTY, SOUTH DAKOTA
OIL AND GAS DEVELOPMENT POTENTIAL MAP

INTRODUCTION:

Jackson County is located in the south central portion of the state, west of the Missouri River. It comprises Tps. 1-4 S., Rgs. 18-25 E.. The topography is rolling hills and open grasslands with most drainage occurring with a southern flow.

This county is located over a Pre-Cambrian structural high that extends in a east-west direction. The regional dip is somewhat southern and increases toward the White River. The majority of the surface is covered by Cretaceous age Pierre Shale with the White River Formation being exposed along the southwest portion of the county. There has only been a total of 12 wells ever drilled in this county, and only 5 in the past 15 years. Currently there is no known oil or gas production in this county.

There are no Indian lands within (the north half of) this county.

OCCURRENCE POTENTIAL:

The north central portion of the county is of high occurrence potential, because of the thick sedimentary package of Paleozoic and Cretaceous age rocks in excess of 5,000 feet (Mallory, 1972). The rocks are known to be productive elsewhere in the state, and the little drilling that has been done in the county, has reported small shows in the Minnelusa Formation. The eastern and western parts of the county are considered to be moderate occurrence potential. This is based on the presence of a sedimentary package of Paleozoic and Cretaceous age rocks of less than 5,000 feet in thickness and no established production (Mallory, 1972).

A type log for this county is the #1 Buckles-Martin, sec. 3, T. 3 S. R. 19 E. This well was drilled in 1974, and penetrated the Pre-Cambrian basement rock at a structural depth of -1350 below sea level.

DEVELOPMENT POTENTIAL:

Jackson County is classified as moderate development potential. Because the occurrence potential is high to moderate, and the drilling activity also has been moderate, in the past 15 years, the area is considered moderate development. The next 15 years are expected to be approximately the same, with five or six wells being drilled in this county.

REFERENCE CITED

Mallory, W. W., (ed.) 1972, Geologic atlas of the Rocky Mountain Region: Rocky Mountain Association of Geologists, p.56.